



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/591,312

09/01/2006

Douglas Paul Newton

1-28324

8155

4859 7590 02/22/2008  
MACMILLAN SOBANSKI & TODD, LLC  
ONE MARITIME PLAZA FIFTH FLOOR  
720 WATER STREET  
TOLEDO, OH 43604-1619

EXAMINER

STOUT, MICHAEL C

ART UNIT

PAPER NUMBER

3736

MAIL DATE

DELIVERY MODE

02/22/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,312	<b>Applicant(s)</b> NEWTON, DOUGLAS PAUL	
	<b>Examiner</b> MICHAEL C. STOUT	<b>Art Unit</b> 4123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>March 12, 2007</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:
  - a. Page 2 of the disclosure makes references to claims 1 and 21 and should be removed because the claims may change or be canceled during the course of prosecution, which would then result in altering the written disclosure.  
Appropriate correction is required.
2. Claim 17 is objected to because it cites the limitation of a tooth incorporated into "each step" which lacks antecedent basis in the claim.  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
4. Claims 1-5, 10, 14, 18, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Currie US 5,495,854.

Regarding **claim 1**, Currie discloses a flow measurement device comprising comprising a hollow body [body of the cup 10 defined by the sidewall 14] having an inlet [open end 12] for receiving fluid and an outlet [port 18], wherein the inlet and outlet are spaced apart from each other [see Figure 2], the cross-sectional area of the body being greater than the cross-sectional area of the outlet (the cross-sectional area of the outlet shown in Figure 2 is smaller than the body) and wherein in use the device is oriented such that the inlet is above the outlet and the measured peak flow is proportional to the maximum height of fluid within the body (urine enters the opening of the cup and drains through the port, the level of the urine in the cup will continue to increase until the rate of the stream entering the cup is equal to or less than the rate of the urine exiting the cup, Column 4, Lines 17-40).

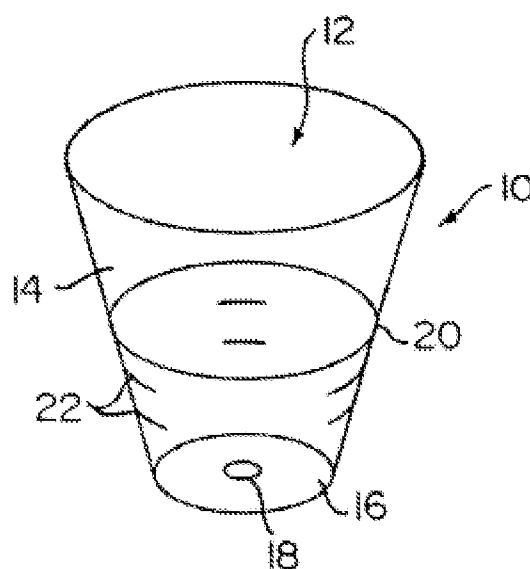


FIG. 2

Regarding **claim 2**, Currie further discloses the device wherein the outlet is circular in cross-section (port 18, Figure 2).

Regarding **claim 3**, Currie further discloses the device wherein the outlet is so shaped and dimensioned as to present a hydro-dynamically thin orifice to fluid efflux (the port 18 is precisely sized so that there is appropriate flow rate of urine exiting the cup 10 and the size of the port 18 can be designed to take into account a range of factors, such as age, bladder size, sex, etc, of the patient, see Column 4, Lines 8-16).

Regarding **claims 4 and 5**, Currie discloses the device further comprising scale means comprising at least one indicia (to enable the user to determine flow rates, the sidewall 14 of the cup 10 contains visual indicia 20, see Column 4, Lines 28-48) for determining the peak height of fluid in the hollow body.

Regarding **claim 10**, Currie further discloses the device wherein the hollow body is constructed from a transparent material (indicia 20 may be provided on the outside of the cup 10 if it is of clear plastic, Column 4, Lines 32-35).

Regarding **claim 12**, Currie further discloses the device wherein the hollow body is cylindrical in shape (wall of the hollow body defines a surface that is cylindrical in shape Figure 2).

Regarding **claim 14**, Currie further discloses a device wherein the hollow body comprises at least two portions each having different cross sectional areas (the cross sectional area of the hollow body decreases from one end to the other and results in

two portions of the hollow body having different cross sectional areas, see Figure 2 and Column 5 Lines 43-59) .

Regarding **claim 18**, Currie further discloses a device wherein the fluid is urine (Column 2, Lines 60-63).

Regarding **claim 19**, Currie further discloses a device wherein urine is collected and effluxed through a port, it is inherent that the effluxed fluid would be collected in a container, urine receptacle or toilet.

Regarding **claim 21**, Currie discloses determining the peak flow rate of a fluid using the device as claimed in claim 1, comprising the steps of  
(a) introducing fluid to the inlet of the device (a stream of urine is directed through the open end, see Column 4 Lines 17-25); and  
(b) determining the peak fluid level within the hollow body (the fluid will continue to rise until the flow rate equals or drops below the fluid rate through the port); wherein the peak fluid flow rate is proportional to the maximum height of fluid in the body (Column 3, Line 44 through Column 5, Line 2).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Currie.

Currie discloses a device comprising a hollow body having a diameter of about 70-50mm and an outlet orifice having a diameter of about 4mm.

Currie fails to disclose the device wherein the hollow body has a diameter of 30mm and the outlet orifice has a diameter of 4mm.

However it would have been obvious to a person of ordinary skill in the art to modify the device disclosed by Currie by changing the hollow body to create a kit wherein the hollow body has a diameter of 30mm and an outlet orifice of 4mm in order to change the volume of the hollow body and thereby supply a user with a kit containing a variety of different cups, either having different volumes, exit port diameters, or levels of indicia 20, an individual can self-determine a good or poor urinary stream, or monitor whether his flow rate is increasing or decreasing over a period of time (see Column 5, Lines 59-65).

8. Claims 6, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Currie in view of Muller et al. (US 4,753, 249).

Currie teaches device comprising multiple scale means comprising multiple indicia on the wall of the hollow body for representing a different peak flow rate or range of peak flow rates.

Currie fails to teach a device wherein the scale means comprises a least two different colored bars, or wherein the scale means comprises heat sensitive material providing a semi-permanent or permanent indication of fluid height wherein the heat sensitive material is applied to the wall of the hollow body.

Muller teaches a flow rate detection device comprising a least two different colored bars (84a-84e, liquid crystal ink stripes which change color from translucent to opaque black (Column 7, Lines 23-54), which are made of heat sensitive material to provide a semi-permanent or permanent indication of fluid height (the portions of the liquid crystal ink coating 36 opening up due to heat from urine Column 5, Lines 35-61), wherein the heat sensitive material is applied to a wall of a hollow body (see Figure 5).

Both Currie and Muller teach flow rate measurement devices.

Thus it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the device disclosed by Currie to substitute the heat sensitive color changing bars as taught by Muller for the indicia because color changing indicators of fluid levels are well known in the art (see Muller Column 1, Line 35 through Column 2, Line 17)



9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Currie in view of Muller as applied to claim 8 above and in further view of Brennan (US 4,776,485).

Currie/Muller fails to teach the device wherein the heat sensitive material is applied to a portion of the wall of the hollow body with a reduce wall thickness.

Brennan teaches the use of a thinner material to facilitate the transfer of heat (Column 6, Lines 9-33)

Currie/Muller and Brennan teach heat transfer.

At the time of the invention it would have been notoriously obvious to a person of ordinary skill in the art to modify the device taught by Currie/Muller by applying the heat sensitive material to a portion wall of the hollow body with a reduced wall thickness in order to facilitate heat transfer from the urine to heat sensitive material as evidenced by Brennan and improve sensitivity of the material to heat, this is because the less amount of thermal mass between the heat sensitive material and the heat source (urine) will result in less energy being loss to the wall of the hollow body.

10. Claims 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Currie in view of Dye et al. (US 3,871,230).

Regarding **claim 11**, Currie discloses a device wherein the body is constructed in a funnel shape which provides the equivalent structure of a funnel connected to the body. Currie fails to disclose a device wherein the inlet is connectable to a funnel.

Dye teaches a flow rate detection device wherein the inlet is connectable to a funnel (the aperture 40 to removeably receive the lower opening portion of 42 of the funnel-shaped member 34, see Column 2, Lines 67 through 14).

Both Currie and Dye teach flow rate detection devices.

Thus it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the device disclosed by Currie to include a connectable funnel as taught by Dye in order to help facilitate fluid collection during use and minimize the risk of failing to collect all the urine, because funnels are well known in the art as a means for aiding in collecting fluids.

Regarding **claim 19**, Currie discloses a device for detecting flow rate. Currie fails to disclose the device further comprising a receptacle for catching effluxed fluid.

Dye teaches a device comprising a receptacle (container 24) for catching effluxed fluid.

Both Currie and Dye teach flow measuring devices.

Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify device disclosed by Currie to include a receptacle for catching effluxed as taught by Dye in order to collect the discharged liquid and determine the volume of the liquid discharged (see Muller Column 6, Lines 33-54).

11. Claims 15, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Currie in view of Coanda (US 3,345,980).

Regarding **claims 15 and 16**, Currie teaches a device wherein the cross-sectional area increases (Figure 2) wherein the scale means for determining the peak height of the fluid comprises the increase in cross-sectional area of said hollow body (the scale means comprises the increase in cross-section area which is used to determine the volume of the cup at that level, see Column 4, Lines 49-65)

Currie fails to disclose the device wherein the cross-sectional area increases step wise.

Coanda teaches a urometer wherein a hollow body has a cross-section area which increases stepwise (Figure 2).

Both Currie and Coanda teach urine meters.

Thus it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the device disclosed by Currie by substituting the gradual sloping increase in Currie with the step-wise means taught by Coanda because both methods of increase the diameter of a container where known in the art at the time of the invention.

Regarding **claim 17**, Currie further teaches a device comprising at least one pyramidal tooth is incorporated into the rim of each step (Coanda teaches a device comprising a functional equivalent of a pyramidal tooth, where the step shown in Figure 2 comprising a sloped surface which helps facilitate the visualization of the rising fluid).

***Contact Info***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL C. STOUT whose telephone number is (571)270-5045. The examiner can normally be reached on M-F 7:30-5:00 Alternate (Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Del Sole can be reached on 571-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. C. S./  
Examiner, Art Unit 4123

/Essama Omgba/  
Primary Examiner, Art Unit 3726